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TM 11-305

WAR DEPARTMENT TECHNICAL MANUAL

U.S. Dept. of Army

CHARGING SET SCR-606-A

RESTRICTED. DISSEMINATION OF RESTRICTED MATTER.
The information contained in restricted documents and the essential characteristics of restricted materiel may be given to any person known to be in the service of the United States and to persons of undoubted loyalty and discretion who are cooperating in Government work, but will not be communicated to the public or to the press except by authorized military public relations agencies. (See also par. 28, AR 380-5, 15 Mar 1944.)

WAR DEPARTMENT

29 AUGUST 1944

CHARGING SET

SCR-606-A



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WAR DEPARTMENT,
WASHINGTON 25, D. C., 29 AUGUST 1944.

TM 11-305, Charging Set SCR-606-A, is published for the information and guidance of all concerned.

[A. G. 062.11 (10 Dec 42).]

BY ORDER OF THE SECRETARY OF WAR:

G. C. MARSHALL,
Chief of Staff.

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Major General,
The Adjutant General.

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IC 11(2).

(For explanation of symbols see FM 21-6.)

TABLE OF CONTENTS

4113
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	<i>Paragraph</i>	<i>Page</i>
SECTION I. Description.		
General	1	1
Detailed description	2	1
II. Installation and Operation.		
Initial procedure	3	3
Installation	4	5
Preparation for use	5	5
Operation	6	5
Care of batteries	7	7
Precautions during operation	8	10
Adjustments for field upkeep	9	10
III. Functioning of Parts.		
General	10	11
Low-voltage circuit	11	13
High-voltage circuit	12	13
Meter circuit	13	13
IV. Maintenance.		
Inspections	14	14
Procedure in case charger fails to operate	15	14
Moistureproofing and fungiproofing in- structions	16	15
V. Supplementary Data.		
Maintenance parts list for Charging Set SCR-606-A	17	28

LIST OF ILLUSTRATIONS

<i>Fig. No.</i>	<i>Title</i>	<i>Page</i>
1	Complete Charging Set SCR-606-A	vi
2	Charging Set SCR-606-A packed in Case CS-97-A	2
3	Batteries being charged by Rectifier RA-56-A	4
4	Filling Battery BB-51	6
5	Rectifier RA-56-A with cover removed	8
6	Rectifier RA-56-A with bottom plate removed	9
7	Circuit diagram for Charging Set SCR-606-A	12
8	Method of masking Case CS-97-A	16
9	Masking for top of accessory compartment, Case CS-97-A.....	18
10	Masking Battery Boxes BX-68 and BX-69	19
11	Masking for front panel of Rectifier RA-56-A	20
12	Masking for bottom of chassis of Rectifier RA-56-A	22
13	Masking for top of chassis of Rectifier RA-56-A	23
14	Masking for cover of Rectifier RA-56-A	24
15	Outline drawing of Rectifier RA-56-A	25
16	Outline drawing of Battery Boxes BX-68 and BX-69.....	26
17	Practical wiring diagram for Charging Set SCR-606-A.....	27

DESTRUCTION NOTICE

WHY —To prevent the enemy from using or salvaging this equipment for his benefit.

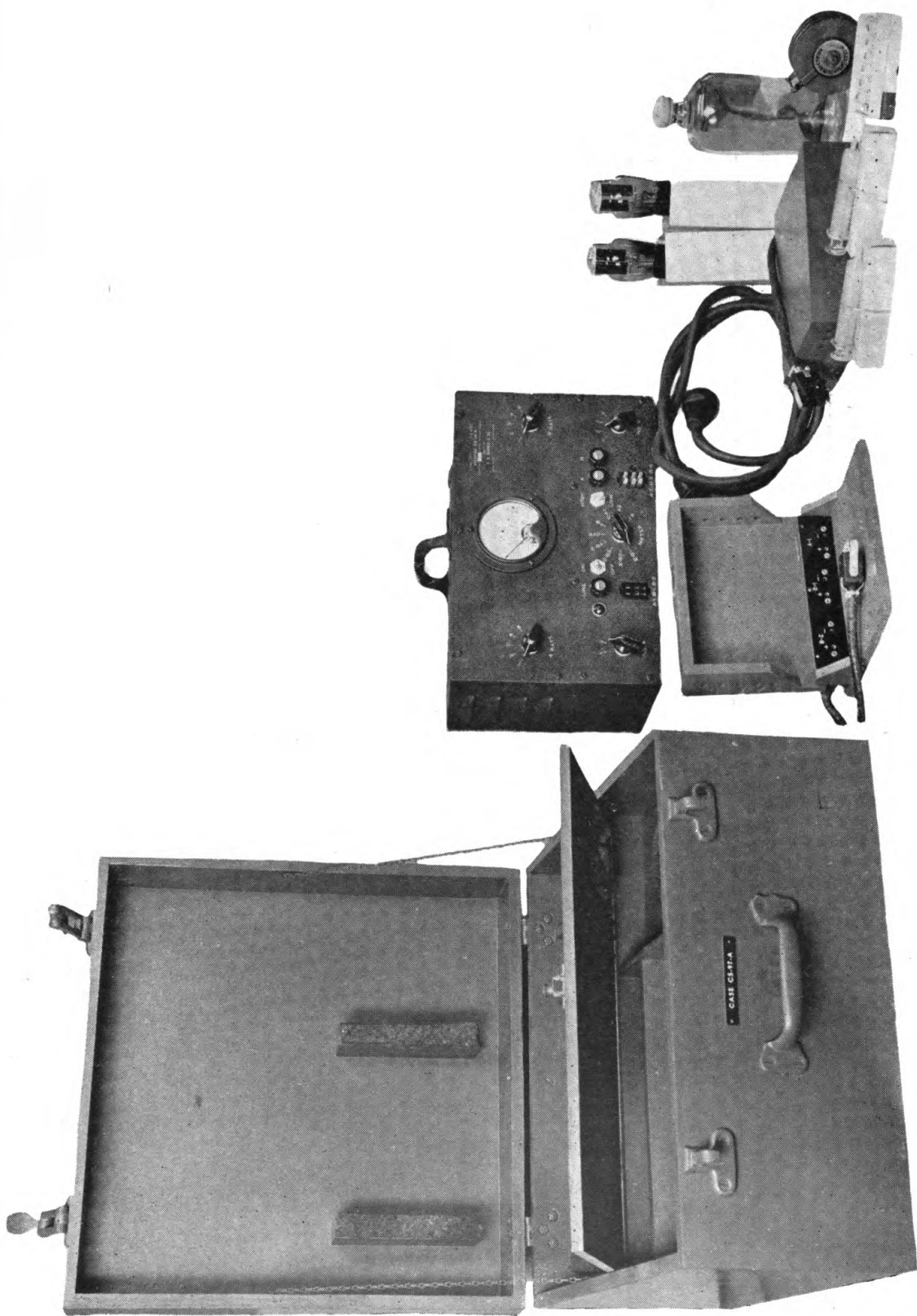
WHEN —When ordered by your commander.

- HOW** —1. Smash—Use sledges, axes, handaxes, pickaxes, hammers, crowbars, heavy tools.
2. Cut —Use axes, handaxes, machetes.
3. Burn —Use gasoline, kerosene, oil, flame throwers, incendiary grenades.
4. Explosives—Use firearms, grenades, TNT.
5. Disposal —Bury in slit trenches, fox holes, other holes. Throw in streams. Scatter.

USE ANYTHING IMMEDIATELY AVAILABLE FOR DESTRUCTION OF THIS EQUIPMENT.

- WHAT** —1. Smash—Rectifier tubes, selenium rectifier, voltammeter, transformers, sockets disk, switches, hypodermic needles, hypodermic syringes, and electrolyte container.
2. Cut —Cord CD-370 and all connecting wires.
3. Burn —Case CS-97-A and Battery Boxes BX-68 and BX-69.
4. Bury or scatter—Any or all of above pieces after breaking and burning.

DESTROY EVERYTHING



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Figure 1. Complete Charging Set SCR-606-A.

RESTRICTED

SECTION I

DESCRIPTION

1. GENERAL.

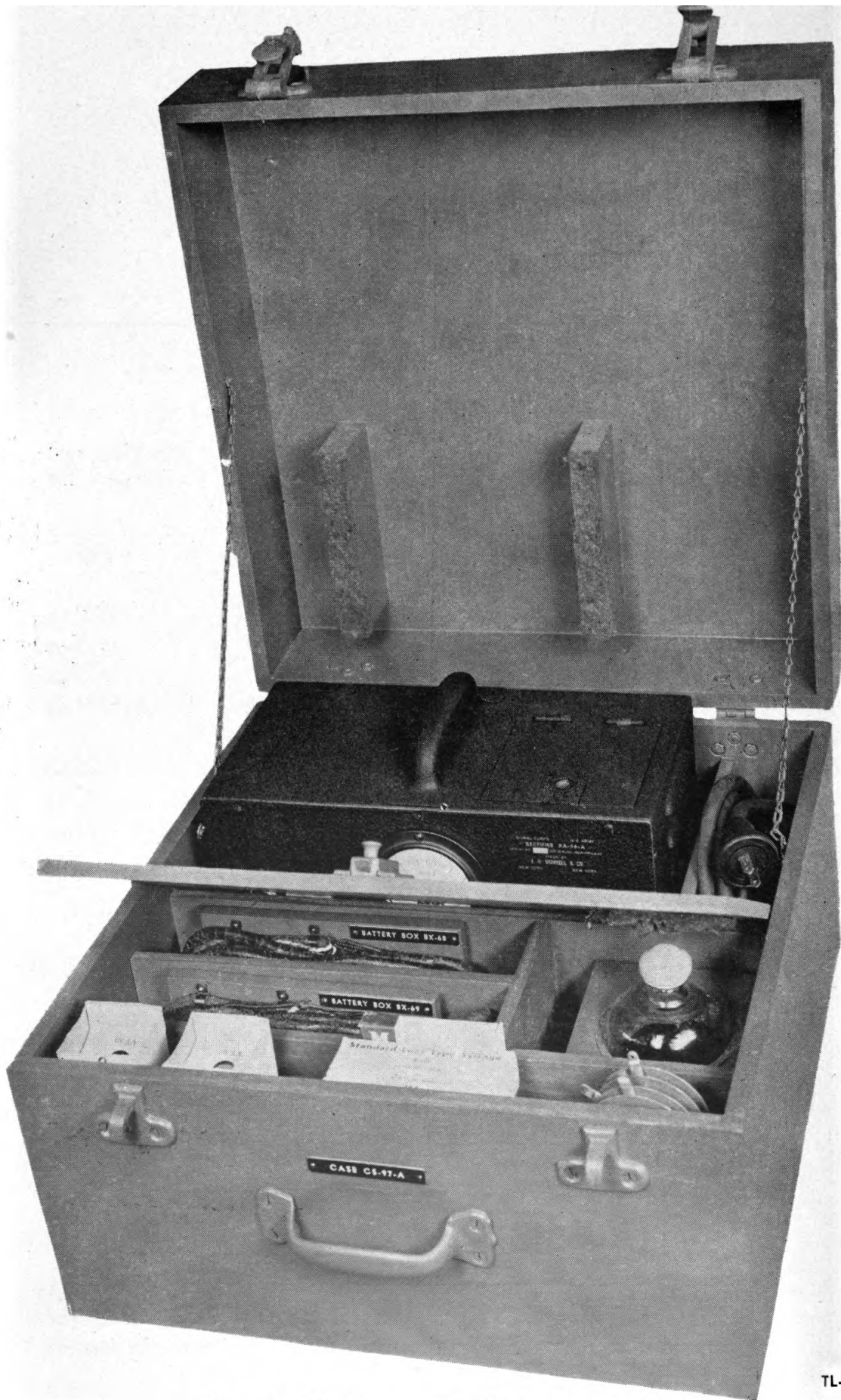
Charging Set SCR-606-A is a complete equipment for charging and servicing miniature storage Batteries BB-51 and BB-52. It includes the following components (fig. 1):

<i>Component</i>	<i>Height (in.)</i>	<i>Width (in.)</i>	<i>Length (in.)</i>	<i>Weight</i>
Rectifier RA-56-A	9¾	7⅛	12½	17 lb, 8 oz
Battery Box BX-68	2⅛	5½	7	1 lb, 7 oz
Battery Box BX-69	2⅛	5½	7	1 lb, 7 oz
Case CS-97-A	11¼	17	18½	18 lb, 11 oz
Hypodermic needles			2¼	
Hypodermic syringes		¾	3⅞	1.25 oz
Battery electrolyte container	6⅞	3		12 oz
Cord CD-370		½	75	11 oz
Rectifier tubes (two spares)	4½	1¾		5 oz
Selenium rectifier (spare)		3⅙	2⅛	7 oz

2. DETAILED DESCRIPTION.

a. Rectifier RA-56-A. Rectifier RA-56-A is designed to convert 60-cycle alternating current, at between 105 and 125 volts, into filtered direct current for charging one or two Batteries BB-51 at 100 milliamperes, and one to four Batteries BB-52 at 20 milliamperes. The charging voltage may be varied to accommodate the desired number of batteries. The input voltage may be varied to compensate variations in the a-c line voltage. At full load this unit requires 40 watts to operate.

b. Battery Box BX-68 and BX-69. Each of the two Battery Boxes BX-68 and BX-69 which are provided with Charging Set SCR-606-A accommodates one Battery BB-51 and two Batteries BB-52 during the charging process. Plugs, attached by means of 6-foot cables to the battery boxes, fit into sockets in the front panel of Rectifier RA-56-A.



TL-92217

Figure 2. Charging Set SCR-606-A packed in Case CS-97-A.

c. Case CS-97-A. Case CS-97-A is a carrying case for Charging Set SCR-606-A and has individual compartments for the components listed above. It is provided with a hinged cover, two latches, and a carrying handle.

d. Hypodermic Syringes and Needles. The hypodermic syringes and needles provided as components of Charging Set SCR-606-A are suitable for filling Batteries BB-51 and BB-52 with sulphuric acid solution or water.

e. Battery Electrolyte Container. The battery electrolyte container consists of a 1-pint glass bottle for carrying dilute sulphuric acid for the batteries. It is provided with a spill-proof stopper.

f. Cord CD-370. Cord CD-370 is a line cord for connecting Rectifier RA-56-A with an a-c power outlet.

g. Rectifier Tubes. Three rectifier tubes are provided as part of Charging Set SCR-606-A; one for use in Rectifier RA-56-A and two for spares. These tubes are used in the high-voltage circuit.

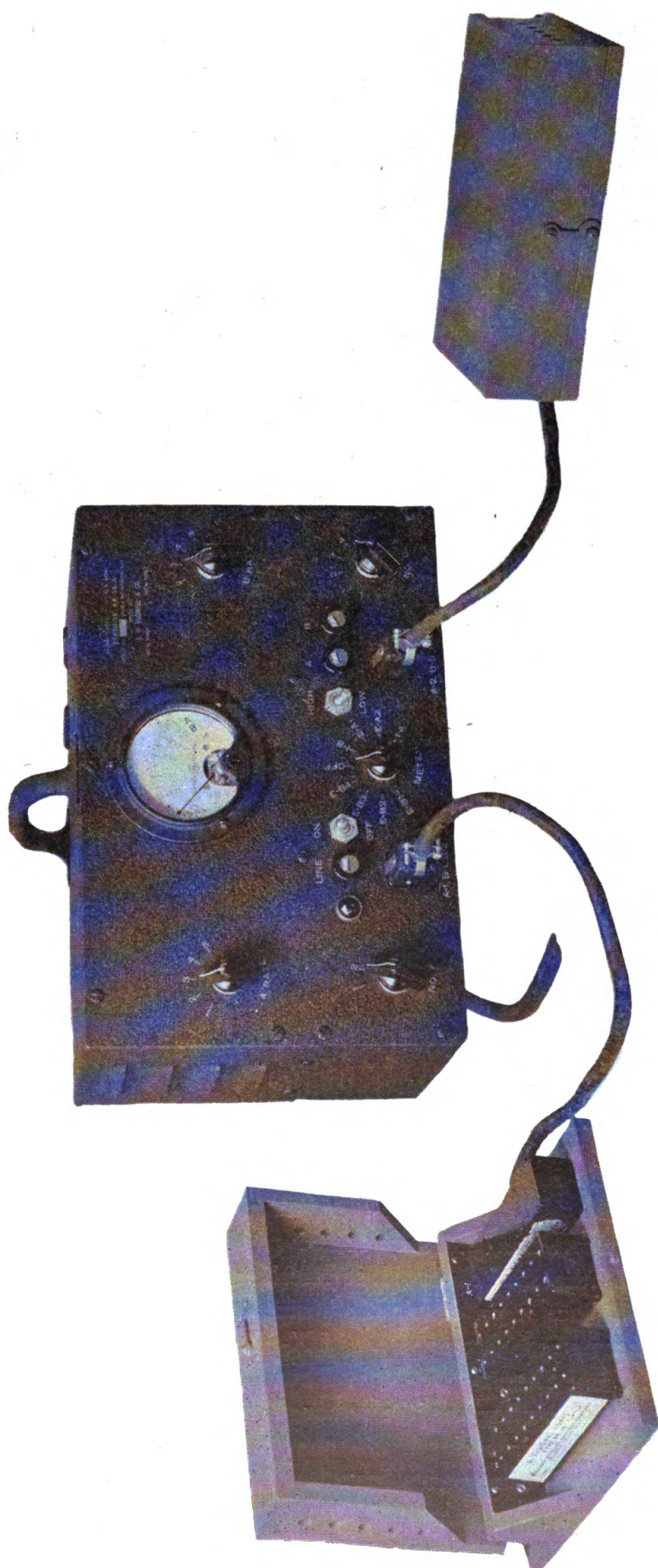
h. Selenium Rectifier. One selenium rectifier forms a part of Charging Set SCR-606-A. It is used in the low-voltage circuit. A spare rectifier is also provided in case the one in the set becomes defective for any reason.

SECTION II

INSTALLATION AND OPERATION

3. INITIAL PROCEDURE.

Charging Set SCR-606-A is packed in Carrying Case CS-97-A as shown in figure 2. To remove Rectifier RA-56-A from Case CS-97-A, place the case in a horizontal position and open the cover wide enough for it to rest against the pull of the stop chains. Lift Rectifier RA-56-A from the case by its handle and place it on a suitable horizontal surface. Remove Cord CD-370 and either or both Battery Boxes BX-68 and BX-69 from the case. If not more than one Battery BB-51 and two Batteries BB-52 are to be charged, only one battery box need be removed. Also remove the electrolyte container, one hypodermic syringe, and one hypodermic needle from the case. After the required components have been removed, close the cover of Case CS-97-A to protect the remaining components.



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Figure 3. Batteries being charged by Rectifier RA-50-A.

4. INSTALLATION.

Load the batteries into the Battery Boxes BX-68 and BX-69 by pushing the battery prongs into the jacks in the battery boxes from the inside, with the battery filling holes uppermost (fig. 3). Start the loading process with the jack marked A-1 for Batteries BB-51 and the jack marked B-1 for Batteries BB-52, and proceed with A-2, B-2, B-3, etc., until the desired number of batteries are in place. For instance, if one Battery BB-51 and two Batteries BB-52 are to be charged, they must be plugged into jacks A-1, B-1, and B-2. The plug and socket of the battery boxes are connected to the socket and plug, respectively, on the front panel of Rectifier RA-56-A. If only one battery box is to be used, the second battery box need not be connected to the rectifier.

5. PREPARATION FOR USE.

a. Check to see that the fuses and rectifier tube are in place. The fuses may be reached from the front panel and are marked LINE, A, and B. The LINE fuse is rated at 2 amperes, the A fuse at $\frac{1}{2}$ ampere, and the B fuse at $\frac{1}{8}$ ampere. The rectifier tube may be reached through the hinged panel at the top of the rectifier. This is a type 80 tube.

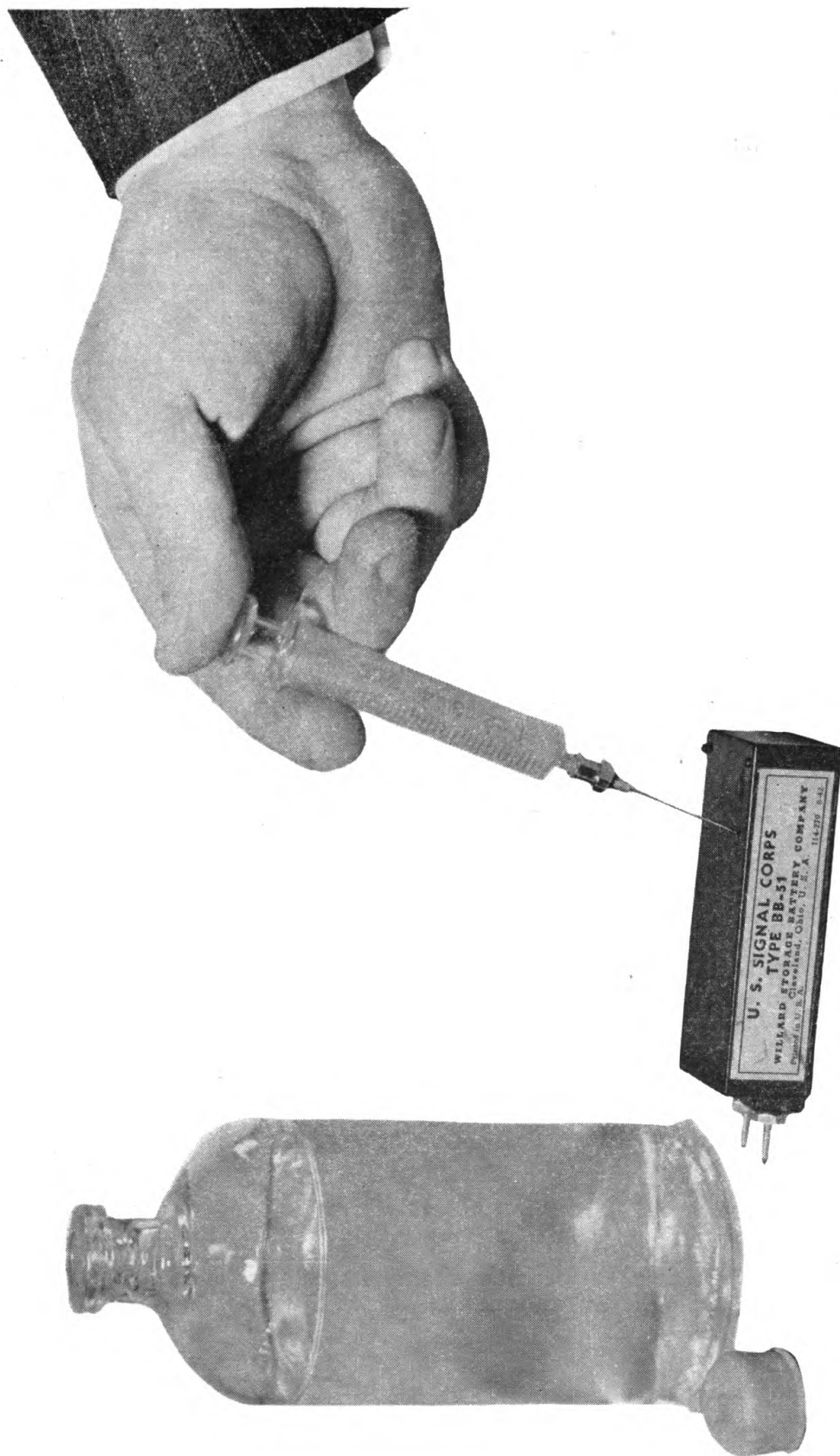
b. With the line switch of Rectifier RA-56-A in the OFF position, connect Cord CD-370 between the charger and a 60-cycle, a-c power source. Before throwing on the line switch, set the various control switches on the front panel of Rectifier RA-56-A as follows:

- (1) Set the A RATE and B RATE switches on step 1.
- (2) Set the HIGH-LOW switch to LOW.
- (3) Set the NO. A. switch to correspond with the number of Batteries BB-51 to be charged and the NO. B switch to correspond with the number of Batteries BB-52 to be charged.

6. OPERATION.

a. Turn the line switch to ON. Turn the METER switch to I-A to check the charging rate of Battery BB-51 (or Batteries). The A charging current is read on the meter on the second scale from the top. The normal charging rate for the A batteries is 100 milliamperes. If the current is low, advance the A RATE switch to step 2, 3, 4, or 5. The initial current may change after a short time, so check the charging rate after about 5 minutes and again every half-hour of the charging cycle.

b. Turn the meter switch to I-B and repeat the procedure. The B current is read on the bottom scale of the meter. The normal B charging current is 20 milliamperes. If the voltage at the power source is low, as



TL-92219

Figure 4. Filling Battery BB-51.

indicated by a low-charging rate on step 5 of the RATE switches for both A and B, turn both the A RATE and B RATE switches to point 1 and snap the HIGH-LOW switch to HIGH. The charging rates are then reset by repeating the above procedure. The charging voltages are checked across each individual battery by turning the meter switch to E-B1 for B-1, E-B2 for B-2, etc. The normal voltage of Battery BB-51 under charge is approximately 6.5 volts, while that of Battery BB-52 is 40 volts. These voltages are subject to some variation, depending on the condition of the batteries. They will be higher than the above values for a completely discharged battery and lower for a battery nearing full charge. If the voltage reading is off-scale on the meter, it indicates an open circuit or a dry or nearly dry cell in the battery corresponding to the meter switch position.

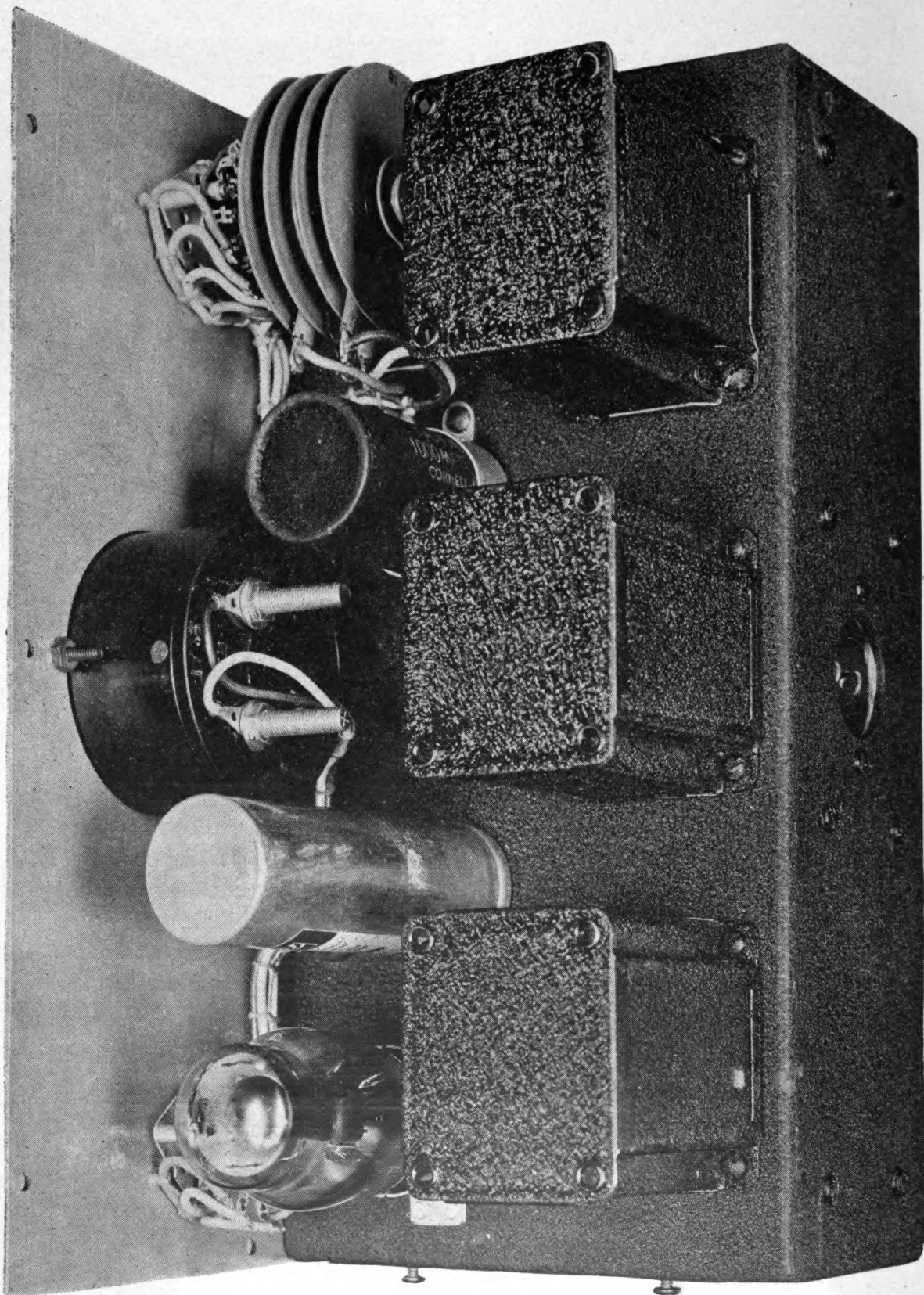
7. CARE OF BATTERIES.

a. Batteries BB-51 and BB-52 are usually received dry-charged from the factory. The electrolyte should be composed of sulphuric acid and distilled water with a specific gravity of 1.280. This electrolyte is carried in the electrolyte container. New batteries, filled with the electrolyte, may be used immediately for the first discharge cycle.

WARNING: WHEN MIXING SULPHURIC ACID AND WATER, ALWAYS POUR THE ACID INTO THE WATER.

b. Filling of the batteries is accomplished with the hypodermic syringe and needles (fig. 4). With the end of the needle dipped into the electrolyte in the container, push in the syringe plunger and then gradually withdraw it. Then insert the needle in one of the filler holes of the battery and push in the plunger until the battery cell is filled. Remove at once any electrolyte flowing out of the battery cells by blotting with a piece of ordinary blotting paper.

c. Before each charge, fill all cells of all batteries with electrolyte. During charge, electrolyte may escape from the batteries due to gas being generated. Blot up this electrolyte at once. Keep all parts of the batteries as dry as possible at all times. The normal charging cycle of a completely discharged battery is 4 to 5 hours.



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Figure 5. Rectifier RA-56-A with cover removed.

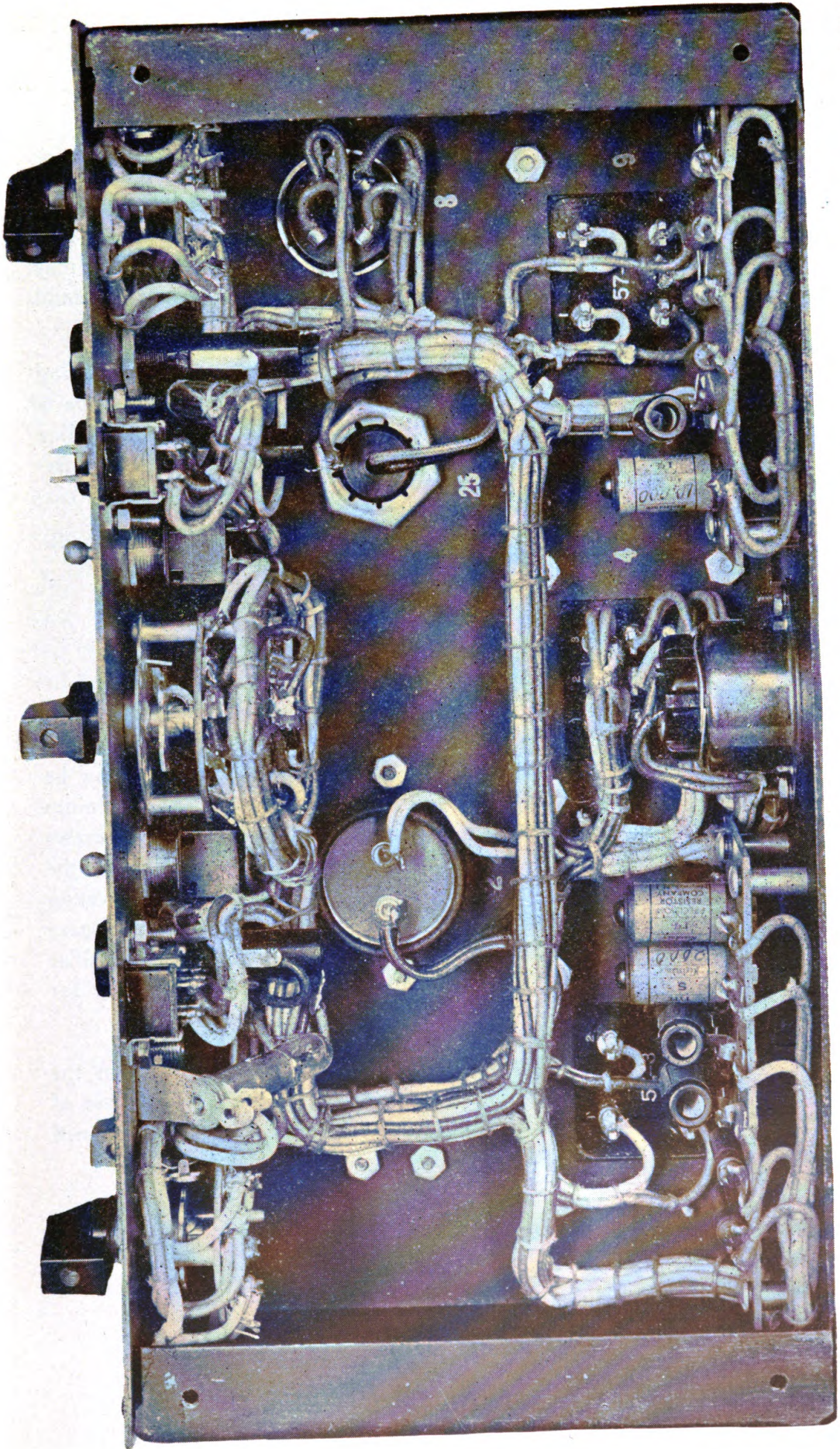


Figure 6. Rectifier RA-56-A with bottom plate removed.

8. PRECAUTIONS DURING OPERATION.

a. Rectifier RA-56-A is designed to charge Batteries BB-51 at 100 milliamperes and Batteries BB-52 at 20 milliamperes. An excessively low-charging rate may indicate a dry cell. If all cells are well filled, it may mean a high-resistance cell or a defective cell. A high-resistance cell may come back after a period of charging. If it does not, the battery should be discarded.

b. Check to see that all switches are properly set, since the full charging voltage will appear across any battery position which does not have a battery connected. Rectifier RA-56-A will not function properly on line voltages below 105 or above 125 volts alternating current, nor on line frequencies differing substantially from 60 cycles.

c. Keep the charger dry and clean at all times. Do not drop it or handle it roughly. Disconnect any batteries not on charge since they may discharge through the circuits of the charger if left connected.

9. ADJUSTMENTS FOR FIELD UPKEEP.

a. No adjustments are provided in Rectifier RA-56-A other than those controlled by the switches on the front panel. Defective rectifier tubes may be replaced by spare tubes. The selenium rectifier, if defective, may be removed and replaced by the spare rectifier. In order to reach the selenium rectifier, remove the five upper screws on the front panel and the screws around the lower edge of the rectifier cover and lift off the cover by the handle. Unsolder the connecting wires and remove the rectifier by loosening the nut on the through-bolt next to the mounting bracket. Install the spare rectifier, tighten the mounting nut, and resolder the leads. The rectifier lugs are color coded yellow for A-C, red for D-C positive, and black for D-C negative.

b. To replace blown or defective fuses, remove the red inserts in the fuse holders, remove the defective fuse from the clip, insert a new fuse of proper size, and screw the insert back in place. These inserts are designed to be removed with a screwdriver or the edge of a ten-cent piece.

SECTION III

FUNCTIONING OF PARTS

10. GENERAL.

Rectifier RA-56-A transforms 60-cycle alternating current at voltages from 105 to 125 volts to direct current at voltages from 12 to 18 volts and from 150 to 200 volts for charging Batteries BB-51 and BB-52. The low-voltage direct current is provided by a selenium rectifier and suitable filter while the high-voltage direct current is provided by a tube rectifier and filter. A tapped auto-transformer, feeding the high- and low-voltage rectifier input transformers, provides means for controlling the charging rates and for compensating for line-voltage changes.



Figure 7. Circuit diagram for Charging Set SCR-606-A.

11. LOW-VOLTAGE CIRCUIT.

Line voltage is supplied from a 60-cycle, 105- to 125-volt a-c source through Cord CD-370 to socket 1. Alternating current passes through line switch 2, fuse 3, and HIGH-LOW switch 27 to the primary of auto transformer 4 (fig. 7). Switch 27 in HIGH position applies the line voltage to taps 1 and 4 of the auto transformer, and in LOW position to taps 1 and 7. The output voltage derived from auto transformer 4 may be varied by taking it between taps 1 and 2, 3, 4, 5, or 6. These taps are selected by the A RATE switch 5-2 which applies the selected voltage to the primary of low-voltage rectifier transformer 6. The secondary of transformer 6 feeds selenium rectifier 21 which rectifies the alternating current, producing pulsating direct current. This pulsating direct current is smoothed into substantially ripple-free direct current by the high-capacity capacitor 22. This direct current is applied to Batteries BB-51 connected in series so that the charging current must be the same for both batteries. When only one Battery BB-51 is charged, switch 17 places resistor 16 in series in place of a second battery. Resistor 16 at the normal charging rate provides a drop equal to a second battery so that the charging current remains substantially constant regardless of the number of batteries on charge.

12. HIGH-VOLTAGE CIRCUIT.

Taps on auto transformer 4 are selected by B RATE switch 5-1 and the resulting a-c voltage is applied to the primary of transformer 9. This voltage is stepped up by transformer 9 and applied to the vacuum tube rectifier 8. The filaments of tube rectifier 8 and pilot light 7 are lighted from the secondary winding 8-9 on auto transformer 4. Tube rectifier 8 provides a pulsating direct current which is smoothed by the high-capacity capacitor 25. The smoothed direct current is applied to from one to four Batteries BB-52, all connected in series for constant charging current. If less than four Batteries BB-52 are charged, one or more of resistors 12 are substituted for the batteries to keep the charging rate constant. Switch 13 substitutes resistors 12 for the batteries removed.

13. METER CIRCUIT.

a. Meter switch 23 shunts meter 24 in with shunt resistors 11-B or 11-A to measure B or A charging currents, respectively. Switch 23 connects multiplier resistor 15-1 or 15-2 in series with meter 24 across B-1, B-2, B-3 or B-4 to measure the voltage across these batteries. Switch 23 also connects multiplier resistor 19 in series with meter 24 and across A-1 or A-2 to measure the voltage across these batteries.

b. If switch 2 is turned off, removing the charging current from the charger circuits, meter 24 may be used to measure the battery voltages at a discharge rate of approximately 4 milliamperes. This measurement may be used to indicate the charge condition of the batteries.

SECTION IV

MAINTENANCE

NOTE: Failure or unsatisfactory performance of this equipment will be reported on W.D., A.G.O. Form No. 468. If form is not available, see TM 38-250.

14. INSPECTION.

a. Inspect Rectifier RA-56-A before and after use to see that dirt or moisture have not accumulated in the equipment. Moisture should be wiped off, or evaporated by dry air, but the equipment should not be baked. Blow out any accumulated dust and tighten all loose tubes, parts, knobs, etc.

b. Battery Boxes BX-68 and BX-69 should be kept clean and dry. When not in use, the battery box cables may be wound around the boxes and should not be bent sharply or allowed to kink.

NOTE: Electrolyte in the electrolyte container should be kept clean and out of contact with metal.

15. PROCEDURE IN CASE CHARGER FAILS TO OPERATE.

a. Check all connections including both ends of Cord CD-370, battery cables, and batteries. See that batteries are firmly inserted in the proper jacks and in the proper sequence.

b. Check setting of all controls.

c. Check fuses.

d. If the B circuit only fails, check for loose or defective rectifier tube and replace if necessary.

e. If the A circuit only fails to operate and alternating current is reaching the selenium rectifier but no direct current is being produced, replace the selenium rectifier after making sure that no short circuit exists across the d-c circuit.

f. If either the A or B circuit fails to operate, check for short circuits across both a-c and d-c circuits and also check for open circuits.

g. If both circuits fail to operate, check for short or open in the auto transformer, defective line switch, defective or blown line fuse, or defective Cord CD-370.

16. MOISTUREPROOFING AND FUNGIPROOFING INSTRUCTIONS.

a. Problems Encountered. The operation of Signal Corps equipment in tropical areas where temperature and relative humidity are extremely high requires special attention. The following items represent problems which may be encountered in operation:

- (1) Resistors, capacitors, coils, chokes, transformer windings, etc., fail.
- (2) Electrolytic action takes place in resistors, coils, chokes, transformer windings, etc., causing eventual break-down.
- (3) Hook-up wire and cable insulation break down. Fungus growth accelerates deterioration.
- (4) Moisture provides leakage paths between battery terminals.

b. Treatment. A moistureproofing and fungiproofing treatment has been devised which, if properly applied, provides a reasonable degree of protection against fungus growth, insects, corrosion, salt spray, and moisture. The treatment involves the use of a moisture- and fungi-resistant varnish applied with a spray gun or brush. Refer to TB SIG 13, Moistureproofing and Fungiproofing Signal Corps Equipment, for a detailed description of the varnish-spray method of moistureproofing and fungiproofing.

CAUTION: Varnish spray may have toxic effects if inhaled. To avoid inhaling spray, use respirator if available; otherwise, fasten cheesecloth or other cloth material over nose and mouth.

c. Preparation.

- (1) Make all repairs and adjustments necessary for proper operation of the equipment.
- (2) Clean all dirt, dust, rust, fungus, oil, grease, etc., from the equipment to be processed.

d. Disassembly.

- (1) CASE CS-97-A.
 - (a) Remove all the equipment contained in Case CS-97-A.
 - (b) The glass electrolyte container, 2 spare VT-80 tubes and hypodermic syringes and needles are not to be treated. The spare selenium rectifier, Rectifier RA-56- (A) and Battery Boxes BX-68 and BX-69 are to be treated.
 - (c) Remove the two chains that are used to support the cover of Case CS-97-A (not to be treated).
- (2) RECTIFIER RA-56-A.
 - (a) Remove the three screws located across the top edge of the front panel.



Figure 8. Method of masking Case CS-97-A.

TL-92223

(b) Remove the top screw of the two screws located at the center of the left- and right-hand edges of the front panel.

(c) Remove the two screws located on each of the two sides of the case.

(d) Remove the three screws on the rear panel of the case. These screws are in the top row running across the back of the case.

(e) Grasp the carrying handle and lift off the top portion of the case.

(f) Remove the VT-80 rectifier tube (not to be treated).

(g) Tag the two wires connected to the meter and mark the tags to show how they are connected to the meter (+ and —), then disconnect these wires from the meter.

(h) Remove the three screws locking the meter to the panel and remove the meter. (See maintenance section of TM 11-472 for treatment of meters).

(i) Turn the case bottom side up and remove the screws found in each corner of the bottom panel and then remove this panel.

(j) Remove the pilot lamp (not to be treated).

e. Masking.

(1) CASE CS-97-A (figs. 8 and 9).

(a) Cover the two large catches with masking tape.

(b) Cover the two hinges for the cover with masking tape.

(c) Mold paper covers for the felt strips found in the large compartment and on the cover. Fasten in place with masking tape.

(d) Cover the two hinges and catch on the cover for the small compartments with masking tape.

(e) Cover the opening for the neck of the glass bottle in this cover with paper and fasten in place with masking tape.

(f) Cover the entrance to the felt-lined compartment for the glass bottle with paper and fasten in place with masking tape.

(2) BATTERY BOXES BX-68 and BX-69 (fig. 10).

(a) Cover the catches on the box covers with masking tape.

(b) Cover the five small holes on each side of the box covers with masking tape.

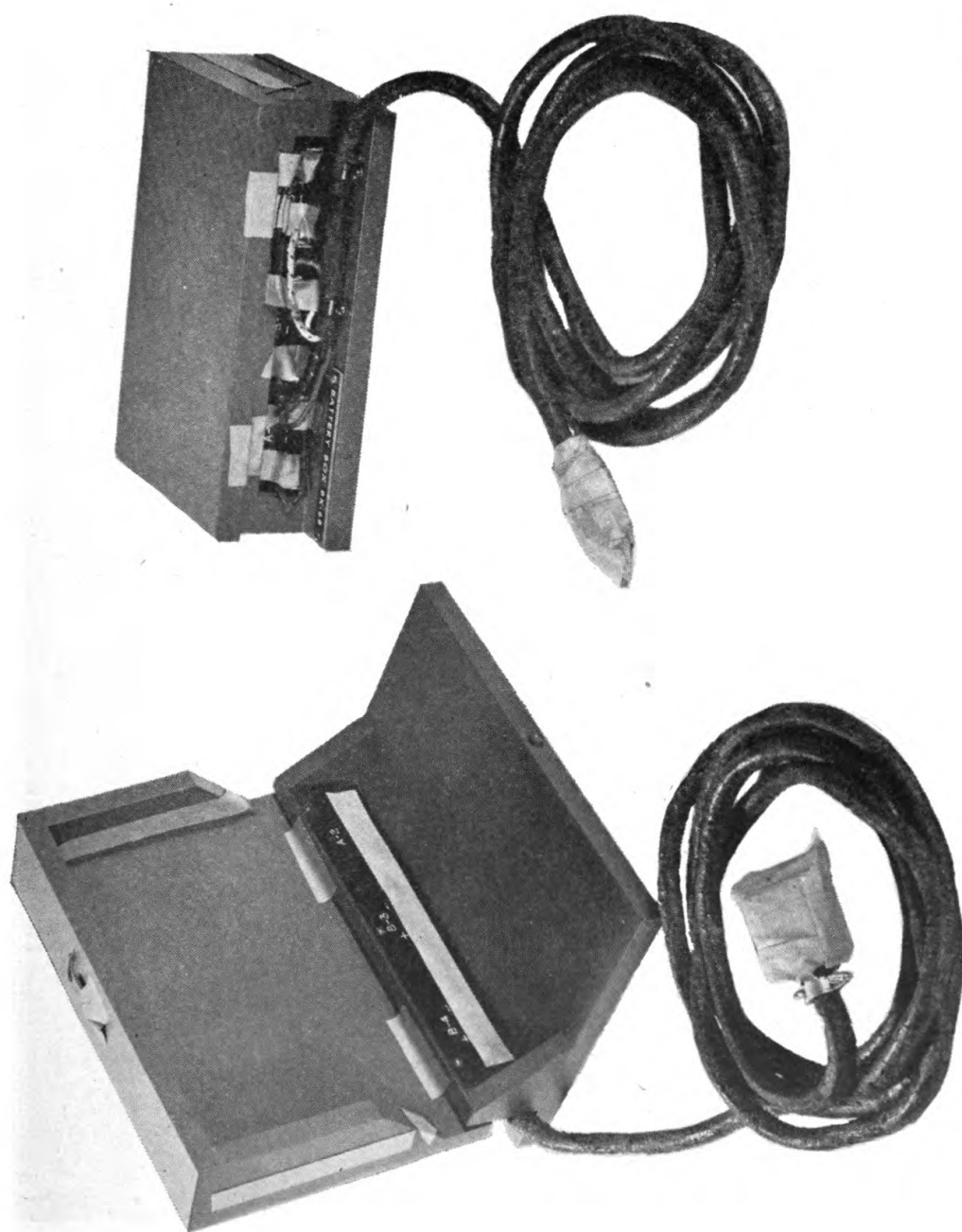
(c) Cover the holes in the terminal strips located inside the boxes with masking tape.

(d) Cover the socket connections on the back of these terminal strips with masking tape.



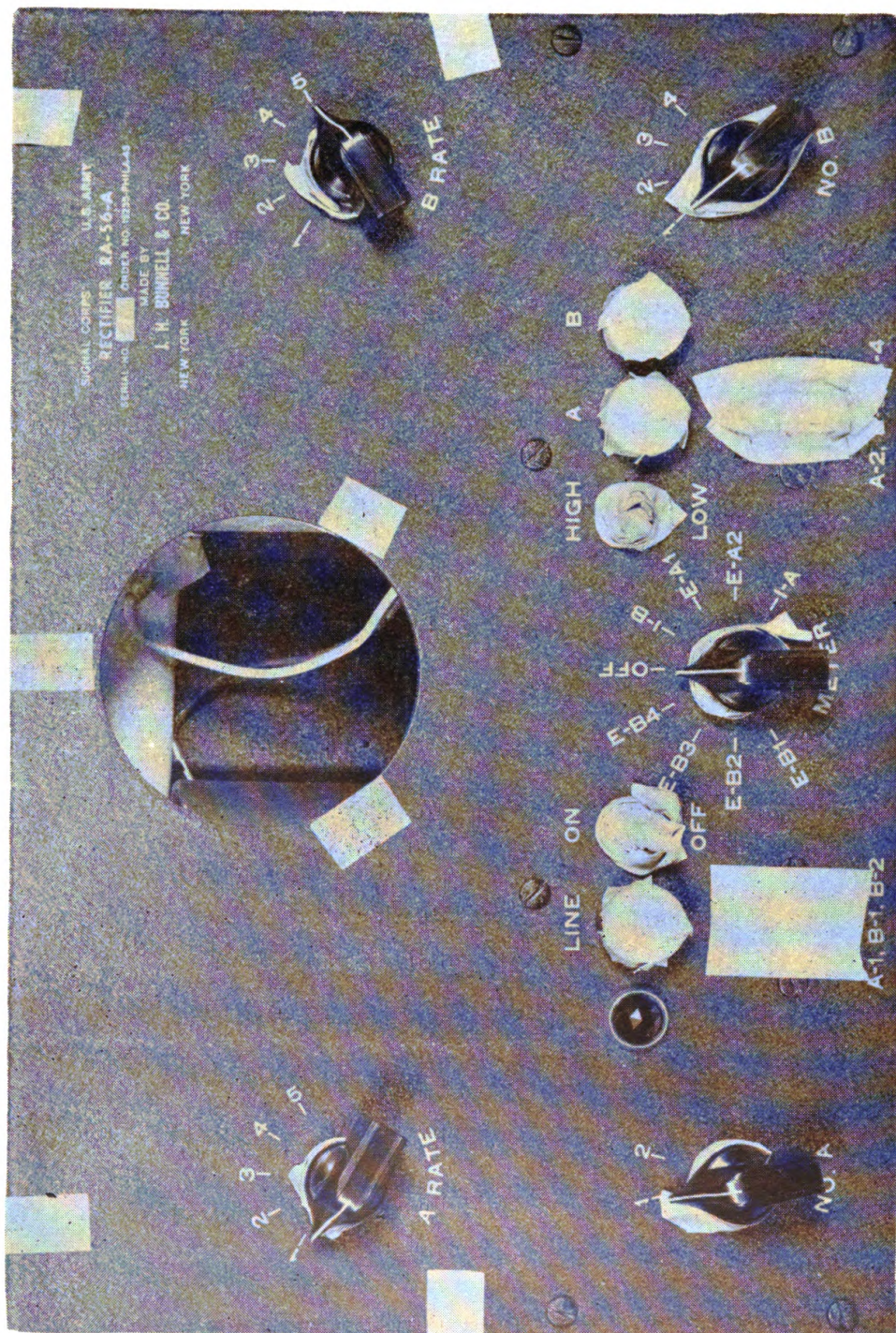
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Figure 9. Masking for top of accessory compartment, Case CS-97-A.



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Figure 10. Masking Battery Boxes BX-68 and BX-69.



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Figure 11. Masking for front panel of Rectifier RA-56-A.

(e) Cover the plugs on the end of the cable for each box with masking tape.

(f) Cover the hinges for box covers with masking tape.

(3) RECTIFIER RA-56-A (figs. 11, 12, 13, and 14).

(a) Cover the hinges and catch on the small door located to the right of the carrying handle on the case with masking tape.

(b) Cover the following parts on the front panel with masking tape: two sockets for the battery box cables, the metal parts of the five tap-changing switches between the knobs and panel, the ON-OFF and HIGH-LOW toggle switches, and the three fuse holders.

(c) Cover the socket for the VT-80 tube with masking tape.

(d) Mold paper covers for the two tap-changing switches located behind the front panel and above the chassis and fasten in place with masking tape.

(e) Cover the terminal lugs on the wires that were connected to the meter with masking tape.

(f) Cover the entrance to the socket for the a-c line cord with masking tape.

(g) Mold paper covers for the three tap-changing switches located underneath the chassis and fasten in place with masking tape.

(h) Cover the socket for the pilot light with masking tape.

(i) Cover all open screw holes in the case and chassis with masking tape.

f. Drying. Dry for 2 to 3 hours at 160°F.

CAUTION: Make sure drying temperature never exceeds 180°F.

The selenium rectifier will be damaged at higher temperatures.

g. Varnishing.

(1) Apply three coats of moistureproofing and fungiproofing varnish with a spray gun.

CAUTION: Selenium rectifiers will be damaged if the varnish contains any phenyl mercurial (mercury). Make sure that the varnish used is Dulac No. 86, Brooklyn Varnish Co. varnish No. 76F, or a varnish that does not contain mercury.

(2) After spraying, remove the paper covers from the five tap-changing switches and varnish the plastic material of the switch assembly with a small brush. Avoid getting varnish on the metal parts.

h. Reassembly.

(1) Remove all masking tape.

(2) Clean all contacts with varnish remover and burnish the contacts.

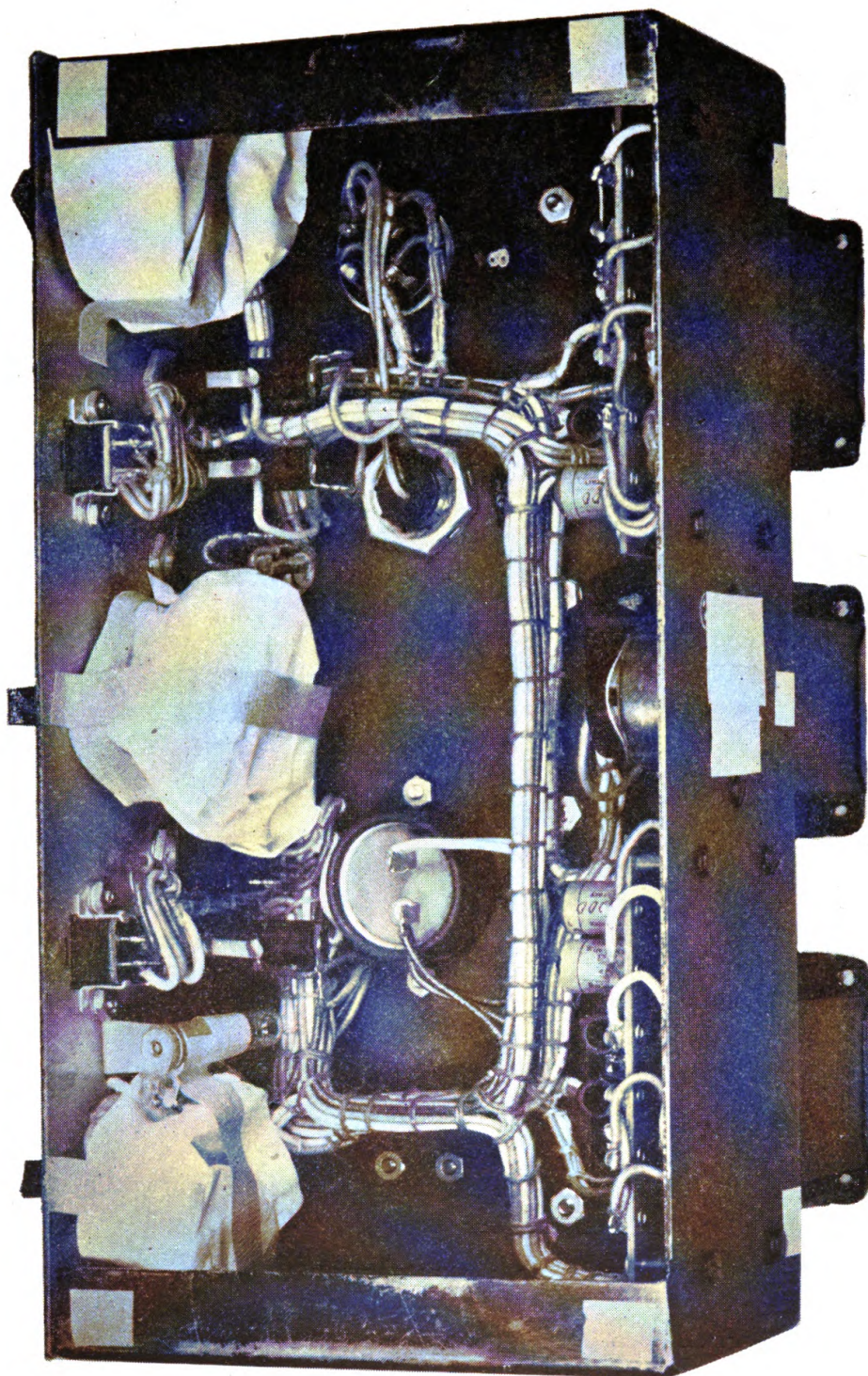
(3) Reassemble the set and test its operation.

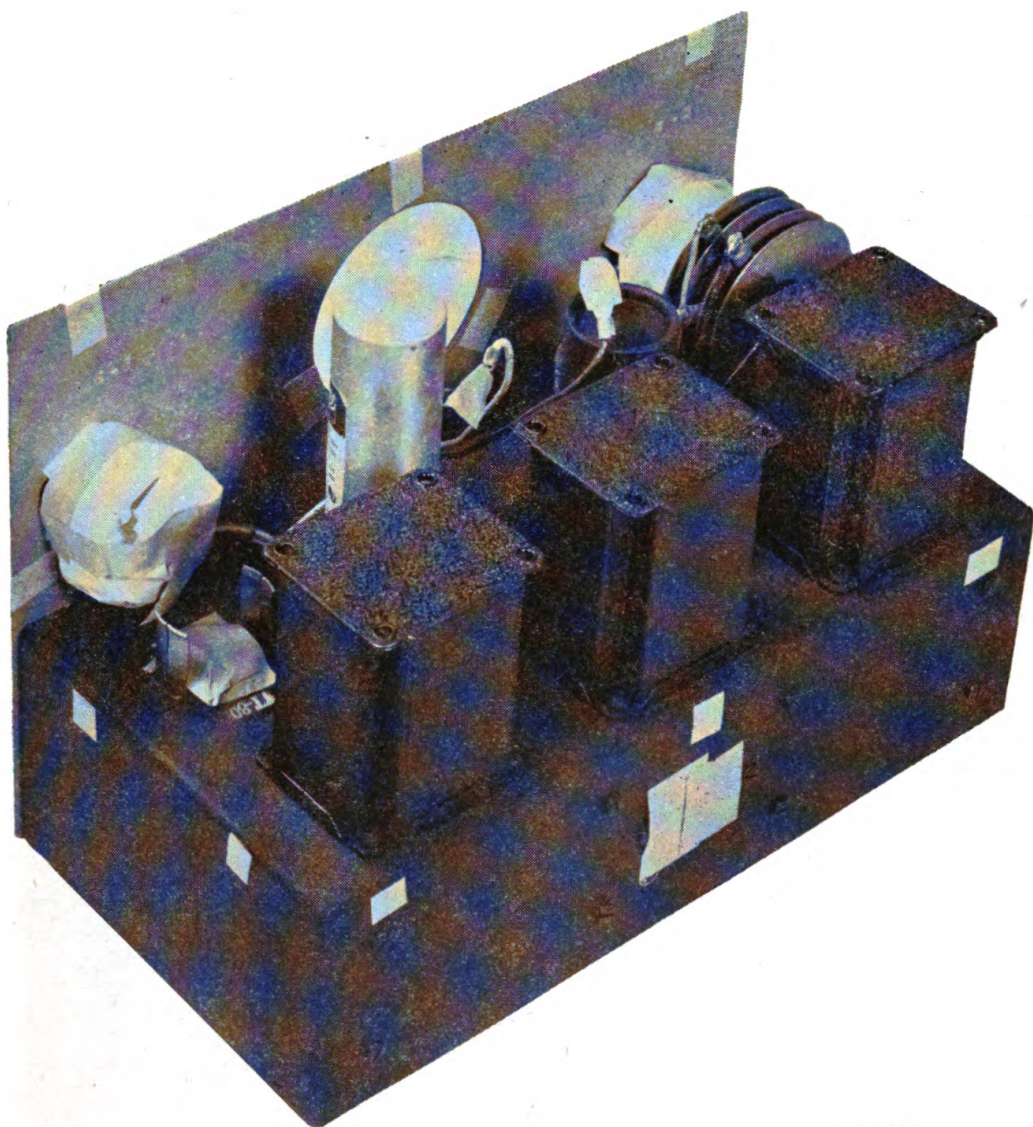
i. Marking. Mark the equipment with "MFP" and the date of treatment.

. MFP—8 June 1944.

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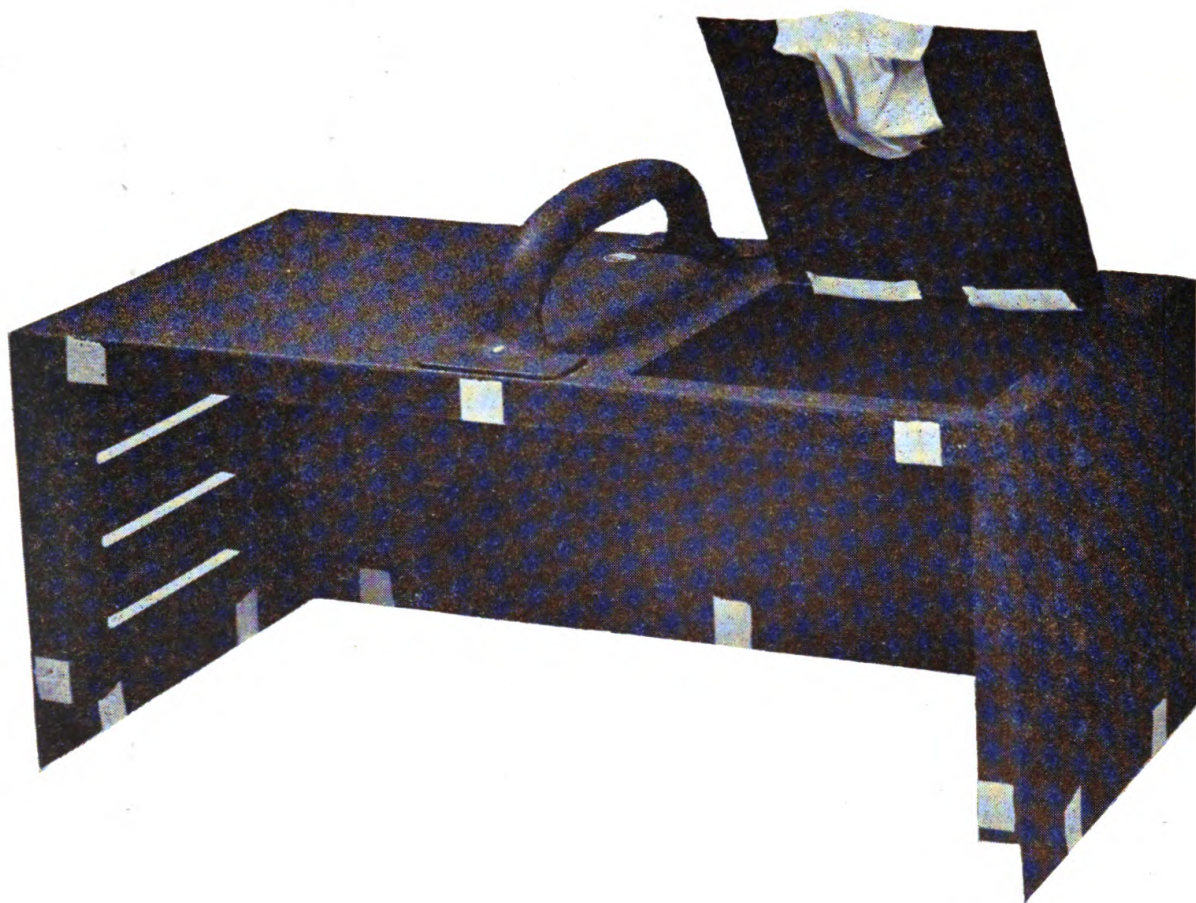
Figure 12. Masking for bottom of chassis of Rectifier RA-56-A.





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Figure 13. Masking for top of chassis of Rectifier RA-56-A.



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Figure 14. Masking for cover of Rectifier RA-56-A.

TL-92230

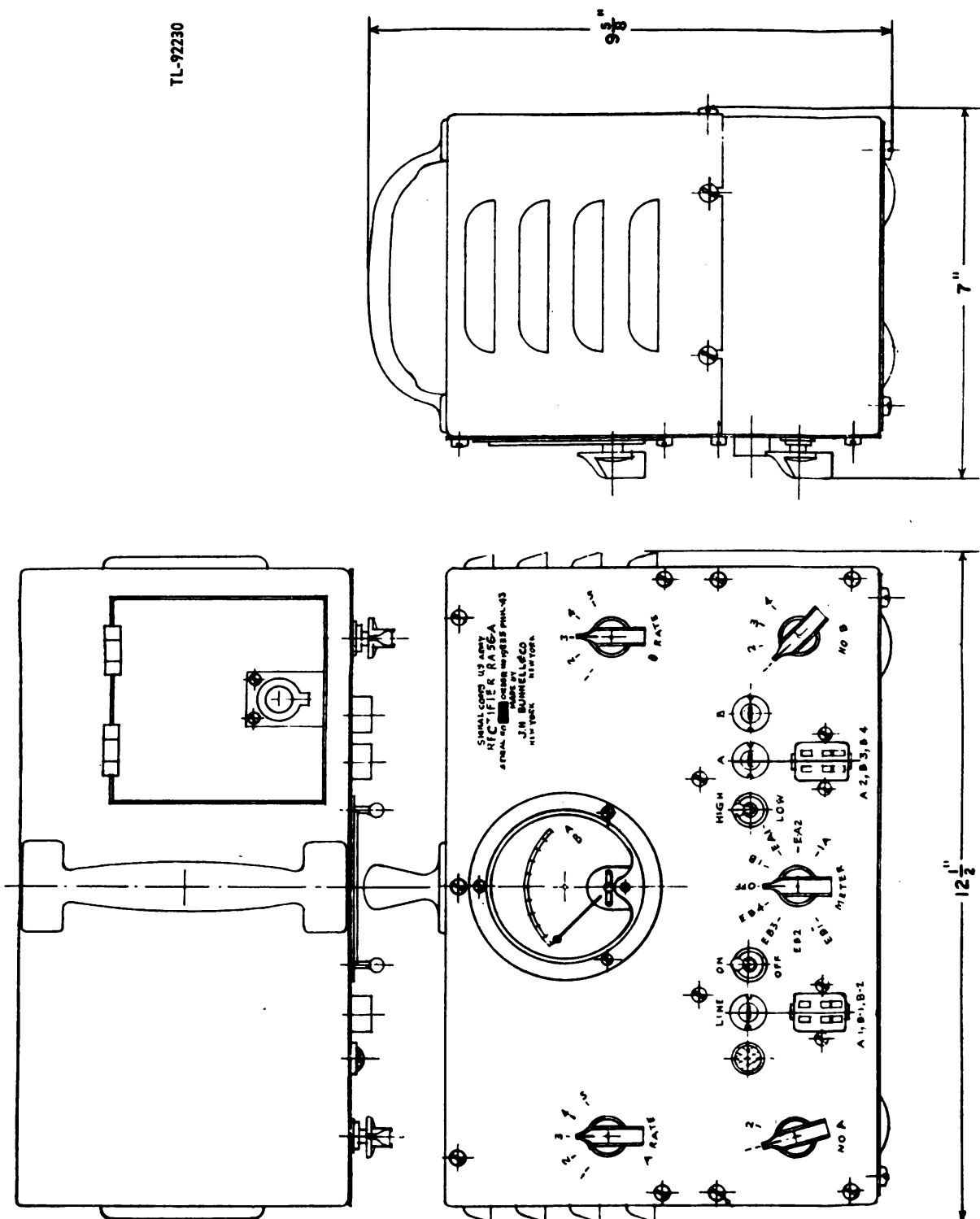
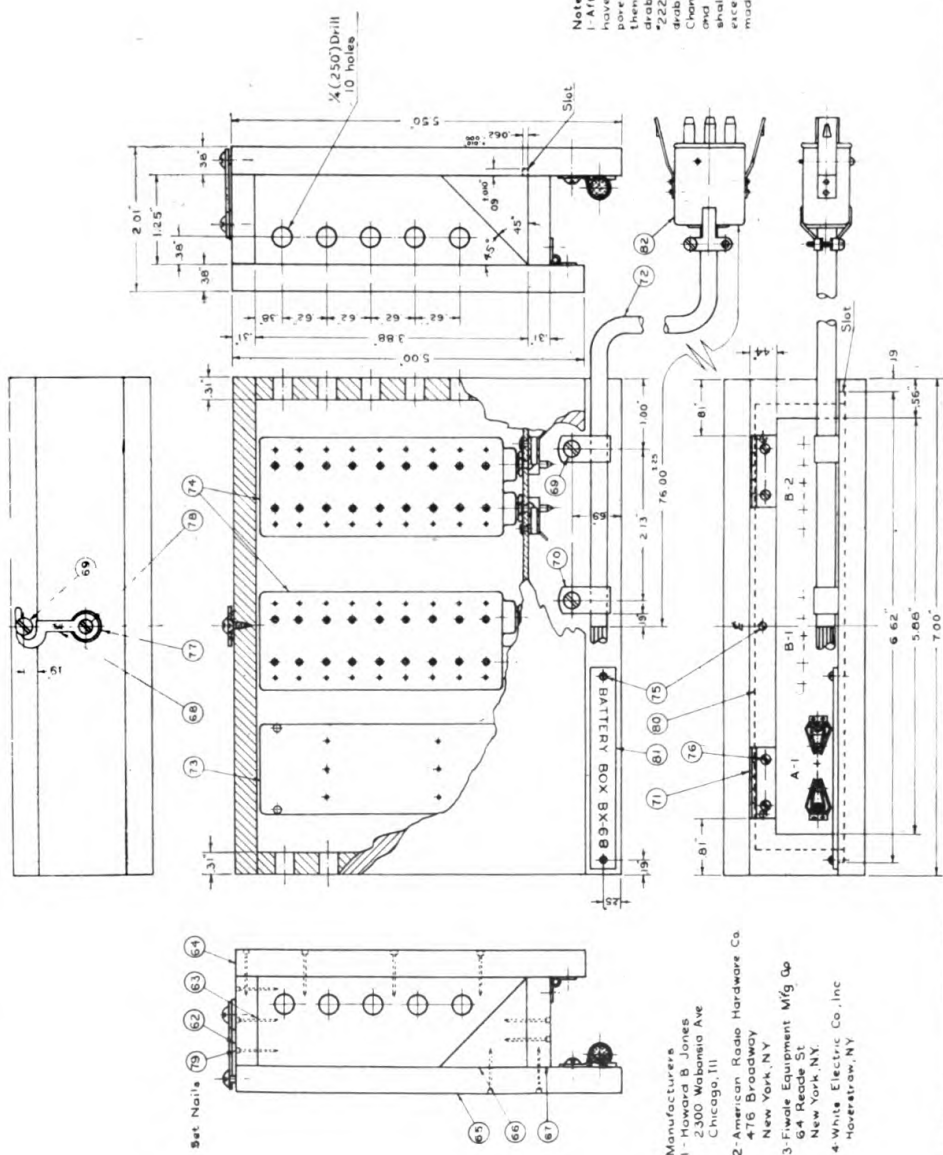
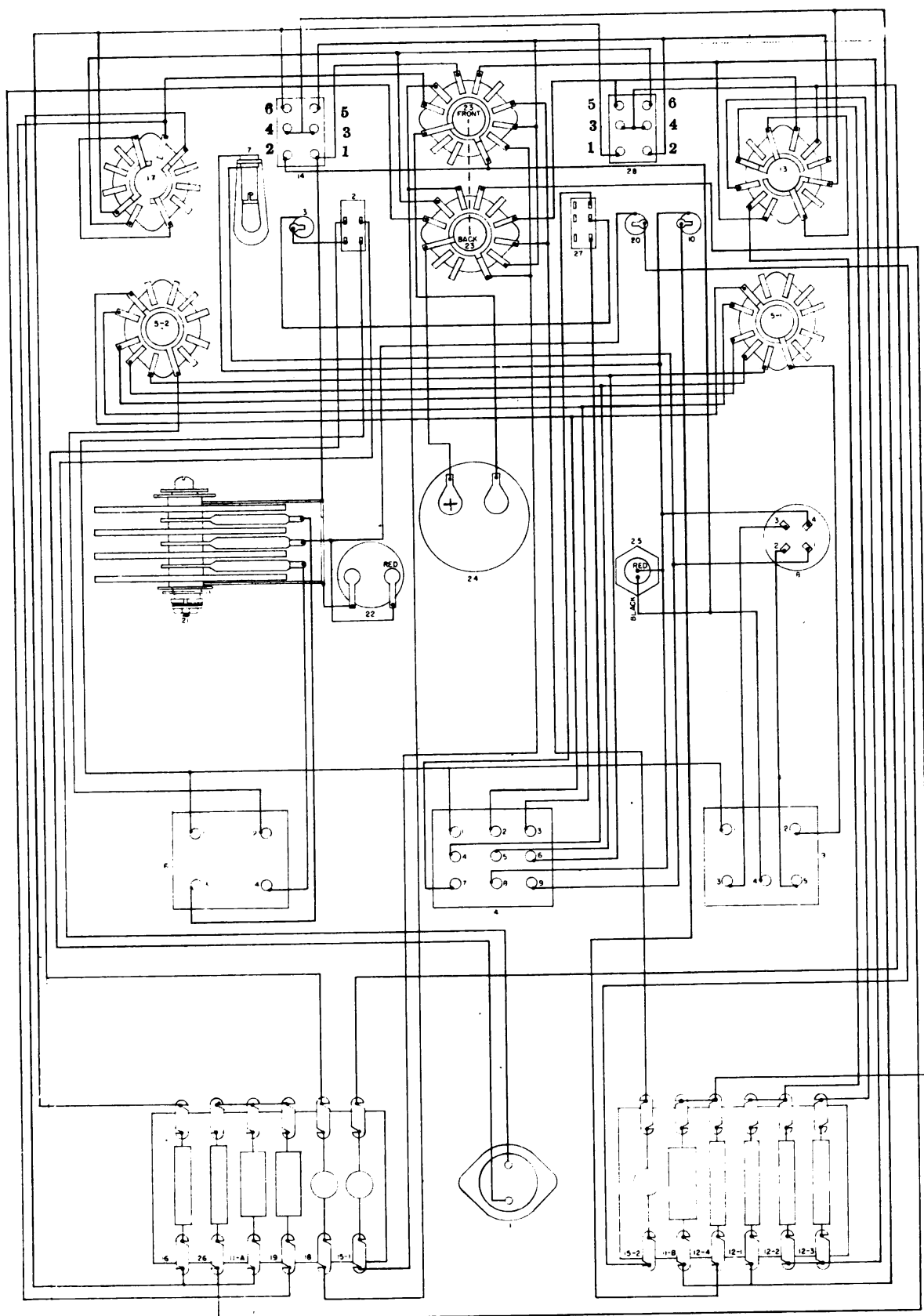


Figure 15. Outline drawing of Rectifier RA-56-A.



REF	NO.	NOMENCLATURE	MATERIAL	FINISH	REMARKS	QUANT	REQ
71	Hinge	Brass				2	
70	Clamp	Steel Cold Plated				2	
68	Rd Hd Wood Screw	Brass				3	
66	Hook	Brass				3	
67	Back Piece	Brass				1	
66	Angle Piece	Soft Maple				1	
65	Base Piece					1	
64	Top Piece					1	
63	Side Piece					2	
62	Front Piece					1	
61	Battery Box BX-68 Assembly					1	
60						1	
59						1	
58						1	
57						1	
56						1	
55						1	
54						1	
53						1	
52						1	
51						1	
50						1	
49						1	
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47						1	
46						1	
45						1	
44						1	
43						1	
42						1	
41						1	
40						1	
39						1	
38						1	
37						1	
36						1	
35						1	
34						1	
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21						1	
20						1	
19						1	
18						1	
17						1	
16						1	
15						1	
14						1	
13						1	
12						1	
11						1	
10						1	
9						1	
8						1	
7						1	
6						1	
5						1	
4						1	
3						1	
2						1	
1						1	



TL-92232

Figure 17. Practical wiring diagram for Charging Set SCR-606-A.

SECTION V

SUPPLEMENTARY DATA

17. MAINTENANCE PARTS LIST FOR CHARGING SET SCR-606-A.

Ref symbol	Signal Corps stock No.	Name of part and description	Quan per unit	Running spares	Orgn stock	3d ech	4th ech	5th ech	Depot stock
	3B306	BOTTLE: battery electrolyte container; 1-pint; glass cylindrical; 3" diam, 5-1/2" high approximate dimensions; soft rubber cap; T. C. Wheaton Co.	1			*	*	*	
	3E3550-1	CORD: 6-conductor; acid-resisting cover; 6'; (connects Rectifier RA-56-A to battery receptacle boxes); J. H. Bunnell & Co. or equal.	2			*	*	*	
	3E1370	CORD CD-370: line power cord; 2-conductor; 6'; (connects charging set to a-c power); J. H. Bunnell & Co. or equal.	1			*	*	*	
	3BA150/1	HYPODERMIC NEEDLE: 21-mm. gauge, 1-1/2" long; (used for refilling battery); Adams Co. or equal.	1	*		*	*	*	

* Indicates stock available.

17. MAINTENANCE PARTS LIST FOR CHARGING SET SCR-606-A (contd).

Ref symbol	Signal Corps stock No.	Name of part and description	Quan per unit	Running spares	Orgn stock	3d ech	4th ech	5th ech	Depot stock
27	3B4150	HYPODERMIC SYRINGE: 5-cc; standard Luer type; (used for refilling battery); Adams Co. or equal.	1	*		*	*	*	
	2Z7228-17	PLUG: 6-contact; male; (connects Rectifier RA-56-A with battery receptacle boxes); Jones Co. P-306-CCTL.	1			*	*	*	
	3H4686A	RECTIFIER RA-56-A: J. H. Bunnell & Co.	1						
30	2Z8639-7	PLUG: 6-contact; female; (connects Rectifier RA-56-A to battery receptacle boxes); Jones Co. S-306-CCTL.	1			*	*	*	
	2Z9406.74	TERMINAL BOARD ASSEMBLY: (part of Battery Box BX-68); J. H. Bunnell & Co.; Signal Corps dwg SIG-A-111, detail 80.	1			*	*	*	
	2Z9406.75	TERMINAL BOARD ASSEMBLY: (part of Battery Box BX-69); J. H. Bunnell & Co.; Signal Corps dwg SIG-A-111, detail 94.	1			*	*	*	

* Indicates stock available.

17. MAINTENANCE PARTS LIST FOR CHARGING SET SCR-606-A (contd).

Ref symbol	Signal Corps stock No.	Name of part and description	Quan per unit	Running spares	Orgn stock	3d ech	4th ech	5th ech	Depot stock
		NOTE: In addition to the above, items shown in the following lists are necessary for higher echelon maintenance of Charging Set SCR-606-A and Rectifier RA-56-A.							
25	3DB15-13.1	CAPACITOR: fixed; electrolytic; 8-mf +40% —10%; 450 v dc (working); (aluminum can; 1 3/8" x 2"; two leads; high-voltage); Cornell-Dubilier-EB-9080.	1			*	*	*	
22	3DB1000-8	CAPACITOR: fixed; electrolytic; 1000-mf. +65% —10%; 15 v dc (working); (paper-encased; 1 3/8" x 2"; two lugs, low-voltage); Cornell-Dubilier FA 1510 Spl.	1			*	*	*	
20	3Z2585	FUSE: 1/2-amp, 250-v; (marked A on panel; A-rate fuse); Littelfuse type 3AG.	1		*	*	*	*	
10	3Z2585	FUSE: 1/8-amp, 250-v; (marked B on panel; B-rate fuse); Littelfuse type 3AG.	1		*	*	*	*	

* Indicates stock available.

17. MAINTENANCE PARTS LIST FOR CHARGING SET SCR-606-A (contd).

Ref symbol	Signal Corps stock No.	Name of part and description	Quan per unit	Running spares	Orgn stock	3d ech	4th ech	5th ech	Depot stock
3	3Z1927	FUSE: 2-amp, 250-v; (marked LINE on panel; to control line circuit); Littell-fuse type 3AG.	1		*	*	*	*	
	3Z3275	FUSE HOLDER: extractor post; Littell-fuse No. 1075.	3			*	*	*	
	2Z5790-10	KNOB: bar-type; black bakelite; ($\frac{1}{4}$ " shaft, $1\frac{1}{4}$ " x $\frac{3}{4}$ "; depth of shaft hole $\frac{1}{2}$ "; Centralab K-120 or Yaxley 336.	5			*	*	*	
7	2Z5927	LAMP LM-27: 6-8 v bayonet-type; brown bead; (power ON pilot).	1		*	*	*	*	
	2Z5985.4	LAMP MOUNTING: (for pilot lamp); Drake 10B red jewel.	1			*	*	*	
14	2Z8639-16	RECEPTACLE: 6-prong; female; (marked A-1, B-1, B-2; battery connection); Jones No. 8306AB.	1				*	*	

* Indicates stock available.

17. MAINTENANCE PARTS LIST FOR CHARGING SET SCR-606-A (contd).

Ref symbol	Signal Corps stock No.	Name of part and description	Quan per unit	Running spares	Orgn stock	3d ech	4th ech	5th ech	Depot stock
28	2Z7227-2	RECEPTACLE: 6-prong; male; (marked A-2, B-3, B-4; battery connection); Jones No. P306AB.	1				*	*	
1	6Z7784-4	RECEPTACLE: 2-prong; male; (line; flush mounting; connects Rectifier RA-56 to Cord CD-370); Amphenol 61F10.	1				*	*	
21	3H4858	RECTIFIER: selenium; full-wave; 4 plates; input 21-v a-c; output 27-v d-c; I. T. & T. No. 9B1AM1.	1				*	*	
11A	3Z5992-11	RESISTOR: fixed; wire-wound; 2.07-ohm $\pm 1\%$; 1-watt; (meter shunt); Precision Co. type P-1.	1				*	*	
11B	2Z5995-12	RESISTOR: fixed; wire-wound; 5-ohm $\pm 1\%$; 1-watt; (meter shunt); Precision Co. type P-1.	1				*	*	

* Indicates stock available.

17. MAINTENANCE PARTS LIST FOR CHARGING SET SCR-606-A (contd).

Ref symbol	Signal Corps stock No.	Name of part and description	Quan per unit	Running spares	Orgn stock	3d ech	4th ech	5th ech	Depot stock
26	3Z6004-1	RESISTOR: fixed; wire-wound; 40-ohm $\pm 10\%$; 1-watt; (rectifier output limiter); IRC BW-1.	1				*	*	
16	3Z6006-7	RESISTOR: fixed; wire-wound; 60-ohm $\pm 10\%$; 1-watt; (meter resistor); IRC BW-1.	1				*	*	
19	3Z6008A1	RESISTOR: fixed; wire-wound; 81-ohm $\pm 10\%$; 1-watt; (meter resistor); Precision Co. type S.	1				*	*	
12	3Z6200-9	RESISTOR: fixed; carbon; 2,000-ohm $\pm 10\%$; 1-watt; (meter shunt); IRC BT-1.	4			*	*	*	
18	2ZK6200-67	RESISTOR: fixed; wire-wound; 2,000-ohm $\pm 1\%$; 1-watt; (Battery BB-51 multiplier); Precision Co. type S.	1			*	*	*	
15	2Z6610-80	RESISTOR: fixed; wire-wound; 10,000-ohm $\pm 1\%$; 1-watt; (Battery BB-52 multiplier); Precision Co. type S.	2			*	*	*	

* Indicates stock available.

17. MAINTENANCE PARTS LIST FOR CHARGING SET SCR-606-A (contd).

Ref symbol	Signal Corps stock No.	Name of part and description	Quan per unit	Running spares	Orgn stock	3d ech	4th ech	5th ech	Depot stock
8	2Z8674.8	SOCKET: 4-prong; (VT 80 mounting); Amphenol type S-4.	1						
5-1, 5-2	3Z9825-58.11	SWITCH: rotary; (11-contact; single-gang, A RATE & B RATE); Centralab 1403.	2			*	*	*	
13, 17	3ZK9825-58.4	SWITCH: rotary; (11-contact; single-gang; No. A & No. B); Centralab 1405.	2			*	*	*	
23	3Z9825-58.48	SWITCH: rotary; (22-contact; double-gang; METER switch); Centralab 1413.	1			*	*	*	
27	3Z8157	SWITCH SW-157: (HIGH-LOW charge control).	1			*	*	*	
2	3Z8130	SWITCH SW-130: (input LINE switch).	1			*	*	*	
4	2Z9621-66	TRANSFORMER: auto; (primary 99/103/107/111/115/123-v, 60-cycle; secondary 5-v, 0.2-amp; 2-5/8" x 2-1/4" x 3-1/4" ±2%); General Winding Co. No. 57.4.	1			*	*	*	

* Indicates stock available.

17. MAINTENANCE PARTS LIST FOR CHARGING SET SCR-606-A (contd).

Ref symbol	Signal Corps stock No.	Name of part and description	Quan per unit	Running spares	Orgn stock	3d ech	4th ech	5th ech	Depot stock
9	2Z9612.92	TRANSFORMER: high-voltage; (primary 115v, 60-cycle; secondary 450-v CT $\pm 2\%$, 0.020-amp; 2-5/8" x 2-1/4" x 3-1/4"); General Winding Co. No. 57.2.	1				*	*	
6	2Z9613.207	TRANSFORMER: power; primary 115-v, 60-cycle; secondary 15.8-v $\pm 2\%$.125-amp; black wrinkle finish; 2-1/4" x 3-1/4"; type K case); General Winding Co. No. 57.3.	1				*	*	
	2J80	TUBE: type 80; tan-1.	1	*	*	*	*	*	
24	3F6299-5	VOLTTMETER: 0/10/50-v, 0/25/250-ma; moving coil; round black bakelite case; 2-3/4" x 1-3/4"; flange 3-15/32"; 3 mounting holes for No. 6-32 screws; 120° spacing; mounts on 0.0781" thick steel panel; Cat. 93 x 75, JHB scale; SIG A-1030; uses external multiplier; GE type DO-41.	1				*	*	

* Indicates stock available.

Order No. 19235-Phila.-43; 1100 copies; August 1944.

